U.S. Application Serial No. 09/782,077

**Amendments to the Claims:** 

This listing of claims will replace all prior versions, and listings, of claims in the

application:

1. (Currently amended) A method for treating a pulmonary disorder associated with

depletion of the S-nitrosoglutathione pool in the lung or depletion of the glutathione pool in the

lung or production of reactive oxygen species in the lung of a patient having such disorder which

comprises delivering into the lungs of said patient as a gas, a therapeutically effective amount of

an agent selected from the group consisting of: (a) compounds having an NO group and having a

hypoxia relieving and smooth muscle constriction relieving effect with the said NO group being

bound in said compound so it does not form NO<sub>2</sub>, NO, N<sub>2</sub>O<sub>3</sub>, N<sub>2</sub>O<sub>4</sub>, OONO and OONO and

any products of their interaction with NO or NO2; and (b) N2O3, which causes repletion or

increase of the S-nitrosoglutathione pool in the lung or protects against toxicity where

glutathione is depleted in the lung or where reactive oxygen species are increased in the lung and

does so independently of reaction with oxygen, with the proviso that said agent does not

comprise H<sub>2</sub>S.

2. (Original) The method of Claim 1 where the pulmonary disorder is associated with

hypoxemia and/or smooth muscle constriction in the lungs and/or lung infection and/or lung

injury.

3. (Original) The method of Claim 1 where the agent is naturally a gas.

4. (Currently amended) The method of Claim 3 1 where the agent comprises NOX

where X is halogen or hydrogen.

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5. (Currently amended) The method of Claim 4 where the halogen is selected from the

group consisting of chlorine and fluorine. 3 where the agent comprises N<sub>2</sub>O<sub>3</sub>.

6. Cancelled.

7. (Original) The method of Claim 1 where N-acetylcysteine is also administered, the

administration of the N-acetylcysteine being in an amount effective to mediate repletion or

increase of the S-nitrosoglutathione pool or potentiate the effect of said agent, in the lung.

8. (Currently amended) The method of Claim 1 where ascorbate is also administered,

the administration being of the ascorbate being in an amount effective to mediate repletion or

increase of the S-nitrosolglutathione pool in the lung and/or protect the lung from injury.

9. (Original) The method of Claim 1 where liquid HNO is also administered, the

administration of HNO being in an amount effective to mediate repletion or increase of S-

nitrosoglutathione pool in the lung.

10. (Cancelled)

11. (Currently amended) The method of Claim 1 where the disorder is selected from the

group consisting of pulmonary hypertension, primary pulmonary hypertension, secondary

pulmonary hypertension, and persistent pulmonary hypertension of the newborn. 10 where the

H<sub>2</sub>S is administered after administration by inhalation of nitric oxide.

12. Cancelled.

13. (Currently amended) The method of Claim 1 where the disorder is pneumonia or

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ventilation pneumonia 10 where the H<sub>2</sub>S is administered at a dosage of 0.1 to 10 ppm in nitrogen.

14. (Cancelled)

15. (Currently amended) The method of Claim 14 1 where the disorder is selected from

the group consisting of pulmonary hypertension, including persistent pulmonary hypertension of

the newborn, adult respiratory distress syndrome, pneumonia, interstitial lung diseases, including

pulmonary fibrosis, and cystic fibrosis.

16. (Currently amended) The method of Claim 1 where the disorder is asthma. 15 where

the agent comprises H<sub>2</sub>S.

17. (Currently amended) The method of Claim 1 where the disorder is adult respiratory

distress syndrome. the agent is selected from the group consisting of (a) compounds capable of

being administered as a gas and having an NO group and having a hypoxia relieving and smooth

muscle constriction relieving effect with the said NO group being bound in said compound so it

does not form NO<sub>2</sub>, NO, N<sub>2</sub>O<sub>3</sub>, N<sub>2</sub>O<sub>4</sub>, OONO and OONO and any products of their interaction

with NO or NO2, and (b) N2O3.

18. (Currently amended) The method of Claim 1 where the agent comprises HNO. 14

wherethe agent is selected from the group consisting of (a) compounds capable of being

administered as a gas and having an NO group and having a hypoxia relieving and smooth

muscle constriction relieving effect with the said NO group being bound in said compound so it

does not form NO2, NO, N2O3, N2O4, OONO and OONO and any products of their interaction

with NO or NO<sub>2</sub>, (b) N<sub>2</sub>O<sub>3</sub>, and H<sub>2</sub>S.

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19. (Currently amended) The method of Claim 1 where the agent comprises NOCl or NOCN. 16 where the H<sub>2</sub>S is administered at a dosage of 0.1 to 100 ppm in nitrogen.

- 20. (Currently amended) The method of Claim 1 where the agent comprises a compound selected from the group consisting of methylnitrososulfinate, methylthionitrite, thionitrosochloronitrite, and thionyldinitrite. 16 where the H<sub>2</sub>S is administered at a dosage of 0.1 to 100 ppm in nitrogen.
- 21. (Currently amended) The method of Claim <u>1</u> where the agent comprises trifluoronitrosomethane or methylnitrite. <del>10, where the H<sub>2</sub>S administration is stopped if bronchial obstruction is caused by the treatment.</del>
- 22. (Currently amended) The method of claim <u>1</u> where the agent comprises ethylnitrite. 14 wherein the when H<sub>2</sub>S is the agent, administration is stopped if bronchial obstruction is caused by the treatment.